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L3 ANSWER 1 OF 1 LIFESCI COPYRIGHT 2002 CSA

AN 1999:24045 LIFESCI

TI Bluetongue virus core protein VP4 has nucleoside triphosphate phosphohydrolase activity

AU Ramadevi, N.; Roy, P.*

CS NERC Institute of Virology and Environmental Microbiology, Mansfield Road,

Oxford OX1 3SR, UK; E-mail: por@mail.nerc-oxford.ac.uk

SO Journal of General Virology, (19981000) vol. 79, no. 10, pp. 2475-2480.

ISSN: 0022-1317.

DT Journal

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LA English

SL English

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L3 ANSWER 1 OF 1 LIFESCI COPYRIGHT 2002 CSA

AB The intact virion of bluetongue virus comprises ten segments of dsRNA enclosed in two concentric protein capsids. The core, which is transcriptionally active, includes three minor proteins (VP1, VP4 and VP6)

which are considered to be the candidates for the core-associated enzymes that transcribe and modify full-length mRNA copies for each of the ten genome segments. Using purified recombinant VP4 protein and core-like particles containing VP4, in this report it is demonstrated that VP4 has nucleoside triphosphatase (NTPase) activity. VP4 is a nonspecific NTPase that hydrolyses four types of ribonucleoside triphosphate (NTP) to the corresponding nucleoside diphosphate. The substrate preference was GTP>ATP>UTP>CTP. NTP hydrolysis by VP4 was maximal when the Mg super(2+) or Ca super(2+) ion concentrations were 4 mM or 6 mM, respectively. The presence of single-stranded polynucleotides

poly(A), poly(U) and poly(C) had little effect on the NTPase activity. Although the enzyme exhibited a broad temperature optimum around 40

dearee

C, the pH optimum was sharp, between pH 7.5 and 8. The K sub(m) and V sub(max), of ATP hydrolysis were calculated to be 0.25 plus or minus 0.05 mu M ATP and 55 plus or minus 4 pmol ATP hydrolysed min super(-1) mu g super(-1), respectively. The K sub(m) was affected by the addition of poly(A) to only a small extent in

contrast to the V sub(max), which was increased by at least twofold.

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L5 21 DUP REMOVE L4 (11 DUPLICATES REMOVED)

=> d 15 1-10 ti, so, au abs

- L5 ANSWER 1 OF 21 CAPLUS COPYRIGHT 2002 ACS
- TI Methods and capture probes for high-throughput multiplex analysis of nucleic acid expression and single nucleotide polymorphism detection in molecular diagnosis of diseases

SO PCT Int. Appl., 63 pp. CODEN: PIXXD2

- IN Hinkel, Christopher A.; Kimmerly, William J.; Yang, Li
- AB Methods are provided for the multiplex anal. of polynucleotide expression and single nucleotide polymorphism detection using capture probes coupled to uniquely identified particles. The methods provided are characterized by high flexibility and high throughput. The method for detg.

polynucleotide expression involves hybridizing a first oligonucleotide primer to the target polynucleotide. CDNA is synthesized by reverse transcription of said target polynucleotide using first oligonucleotide primer wherein the 5' end of the cDNA sequence corresponds to first oligonucleotide primer and the 3' end of cDNA contains at least one nucleotide that extends beyond the 5' end of the target polynucleotide to provided a single-stranded extension. A second oligonucleotide primer is hybridized to the single-stranded extension of cDNA on target polynucleotide. The cDNA on target polynucleotide is extended using a second primer and subsequently amplified in the presence of a detectable label. The amplified cDNA is digested and hybridized to a capture probe (specific for target polynucleotide), coupled to a solid particle like a fluorescent microbead. In another embodiment, multiple capture probes hybridize to different locations of the same target polynucleotide. Flow cytometry is used to det. if the digested cDNA is hybridized to said capture probe, thereby identifying the target polynucleotide. Methods

for

detecting single nucleotide polymorphism involve hybridizing primers (which contain unique hybridization tags that identify the primer which

is

not complementary to the sequence contg. the SNP of interest) to single-stranded polynucleotides contg. SNPs.

The said hybridized primers are extended by primer extension to generate

a

product that contains a hybridization tag and a detectable label. The extension products are hybridized to capture probes by hybridization tags,

where the capture probe is coupled to a particle like a microbead to identify the SNPs.

- L5 ANSWER 2 OF 21 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
- TI Self initiating single primer amplification of nucleic acids.
- SO Official Gazette of the United States Patent and Trademark Office Patents,

(Sep. 25, 2001) Vol. 1250, No. 4, pp. No Pagination. e-file. ISSN: 0098-1133.

AU Ullman, Edwin F.; Rose, Samuel J. (1)

AB A method is disclosed for producing at least one copy of a pair of complementary single stranded

polynucleotides. The method comprises forming, in the presence of nucleoside triphosphates and template dependent polynucleotide polymerase along each of the complementary single

stranded polynucleotides, an extension of a

polynucleotide primer. The polynucleotide primer is comprised of at least a sequence of 16 nucleotides terminating at its 3' end in a 2 to 9 nucleotide sequence (S1), which is complementary with the 3'

ends of both of the complementary single

stranded polynucleotides. The polynucleotide primer has at least an 8 nucleotide sequence (S2) that is 5' of S1, where S2 is 50

to

80% complementary to the nucleotide sequences contiguous with the 3' ends of the complementary single stranded polynucleotides. The extended polynucleotide primer and the single stranded polynucleotides are then dissociated.

- L5 ANSWER 3 OF 21 CAPLUS COPYRIGHT 2002 ACS
- TI PCR-based gene-detecting method for clinical use

SO PCT Int. Appl., 45 pp. CODEN: PIXXD2

6368803

- IN Hirai, Kaoru
- An efficient method for detecting a target gene with high accuracy comprises: (A) prepg. an immobilized single-stranded polynucleotide complementary to the target gene; (B) elongating the polynucleotide strand in the sample which is complementary to the target gene using given primers which are complementary to the target gene and a detectable NTP; (C) dissocg. the thus elongated polynucleotide strand into single strands; (D) repeating steps (B) and
- to amplify the polynucleotide strands; (E) forming hybrids between the immobilized single-stranded polynucleotides and the elongated single-stranded polynucleotides; (F) eliminating the NTP not participating in the above elongation reaction; and (G) detecting the above polynucleotide hybrids. The method was demonstrated by detecting human cytomegalovirus (HCMV-T) and human papillomavirus (HPVT16).
- L5 ANSWER 4 OF 21 CAPLUS COPYRIGHT 2002 ACS
- TI Single primer amplification of polynucleotide hairpins
- SO PCT Int. Appl., 66 pp. CODEN: PIXXD2
- IN Dewhirst, Floyd E.
- Diclosed is a method of exponentially amplifying a polynucleotide hairpin AB using a single primer. The method comprises exposing a hairpin-contg. nucleic acid to a primer which can anneal to the 3'-portion of the hairpin, a template-dependent polynucleotide polymerase, and nucleoside triphosphates under conditions which allow the primer to anneal to the hairpin nucleic acid and then to conditions suitable for prodn. of a complementary copy. This procedure is repeated until the desired degree of amplification is attained. The method can be used to amplify double-stranded polynucleotide and to detect hairpin, double-stranded and single-stranded polynucleotides. Adapters comprising a hairpin oligonucleotide may be enzymically attached to double-stranded DNA, then the DNA may be amplified using a primer complementary to a 3'-portion of the double-stranded DNA using the above procedure. Following the amplification, the amplified DNA may be sequenced using a primer complementary to part of the hairpin DNA.
- L5 ANSWER 5 OF 21 CAPLUS COPYRIGHT 2002 ACS
- TI Amplification and introduction of defined sequences at the 3' end of polynucleotides
- SO U.S., 46 pp., Cont.-in-part of U.S. Ser. No. 923,079, abandoned. CODEN: USXXAM
- IN Laney, Maureen; Chen, Yan; Ullman, Edwin F.; Hahnenberger, Karen M.
- AB A method is disclosed for extending a primer to produce a single-stranded polydeoxynucleotide that has two or more defined sequences. A combination
 - is provided which comprises a template polynucleotide, a blocker polynucleotide, a primer polynucleotide, and a polynucleotide Q. The template polynucleotide has three sequences T1, T2 and T3 wherein T1 is non-contiguous and 3' of T3 and wherein the 5' end of T3 is 5' of the 5' end of T2. The primer polynucleotide has a second defined sequence at
- 3' end that is hybridizable with T1. The blocker polynucleotide has sequence B1 that is hybridizable with T3. Polynucleotide Q has sequences S1 and S2 wherein S1 is 3' of S2 and homologous with T2 and S2 is complementary to a first defined sequence that is to be introduced at the 3' end of the polynucleotide primer, when it is extended during

the

method of the invention. Polynucleotide Q is either attached to the 5' end of the blocker polynucleotide or present as a sep. reagent. The primer is extended along the template polynucleotide and along at least a portion of sequence T2 and thereafter along the polynucleotide Q to give

single-stranded polynucleotide having two or more defined sequences. The method is useful where it is desired to append flanking sequences to a polynucleotide to assist in insertion of a cloning vector, particularly where long strands are employed making it difficult to find suitable restriction enzymes. Introduction of defined sequences is also useful

mutagenesis studies, and for polymerase-dependent amplification methods such as PCR and single primer amplification. The method is demonstrated by the synthesis of **single-stranded polynucleotides** with stem loop structures upon (1) Escherichia coli genomic DNA or (2) Mycobacterium tuberculosis genomic DNA in the presence of human DNA, and their amplification by single primer amplification.

- L5 ANSWER 6 OF 21 CAPLUS COPYRIGHT 2002 ACS
- TI A method of identifying fast-hybridizing single-stranded polynucleotides
- SO Eur. Pat. Appl., 21 pp. CODEN: EPXXDW

а

for

- IN Sczakiel, Georg; Rittner, Karola
- AB An assay for in vitro selection of fast-hydridizing singlestranded polynucleotides for use as inhibitor of pathogens, regulating physiol. processes or as a diagnostic agent is described. The oligonucleotides are preferably oligoribonucleotides.
- The method involves incubating an unlabeled target sequence (up to 3,000 nucleotides) with mixt. of labeled **complementary** oligonucleotides (15-150 nucleotides) prepd., for example, by limited alk.
- or RNAse hydrolysis of of RNA, and taking samples after brief incubations (max. <5 min) and analyzing the sample for bound targets. The method is demonstrated by selection of short probes that rapidly hybridized to sequences from HIV-1.
- L5 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2002 ACS
- TI Isolation and characterization of mammalian endo-exonuclease, and cloning of human cDNA encoding it
- SO U. S. Pat. Appl., 51 pp. Avail. NTIS Order No. PAT-APPL-7-914,284. CODEN: XAXXAV
- IN Chow, Terry Y. K.; Resnick, Michael A.
- AB A mammalian endo-exonuclease (I) corresponding to RhoNUC of Saccharomyces cerevisiae was purified from CV-1 and COS-1 cells. I had a greater activity in 5'.fwdarw.3' direction than in the 3'.fwdarw.5' direction.
- also exhibited an exonuclease activity on double-stranded polynucleotides and endonuclease activity on single-stranded polynucleotides. The effects of divalent metal ions, NaCl, ATP, and GTP on the I activity were also demonstrated. Antibody to the mammalian I was raised and its reactivity to I of various sources assessed. Two clones of cDNA for 2 regions of human I, resp., were isolated and their amino acids deduced. Biol. roles of I with respect to cellular growth, mutation, recombination, etc., as well as its use in medication were also discussed.

- TI Method for amplifying single-strand target polynucleotide using modified extender probe
- SO Eur. Pat. Appl., 44 pp. CODEN: EPXXDW
- IN Western, Linda M.; Hahnenberger, Karen M.; Rose, Samuel; Becker, Martin; Ullman, Edwin F.; McGall, Glenn H.
- AB A method for forming, from an extender probe and a single-stranded target polynucleotide sequence to be amplified, a product polynucleotide free of unmodified extender probe is described. This is achieved by hydridizing to the 3'-end of the target polynucleotide sequence the 3'-end of the extender probe where the extender probe contains a sequence substantially identical to a sequence S2 at the 5'-end of the target polynucleotide sequence and extending the extender probe along the target sequence. The 3'-end of the extender probe not hybridized to the target sequence is

then

modified and hybridized to a primer **complementary** to the 3'-end of the extended extender probe; the primer having sequence S2 at its 3'-end, and extending the primer along the extended extender probe.

Means

of modifying the extender probe include exonuclease degrdn., chain extension, and utilizing a phosphorothicate-contg. oligonucleotide. Variations of the method and com. kits are also claimed.

- L5 ANSWER 9 OF 21 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
- TI Alterations in phenotypic characteristics of adenovirus oncogene E-1-transformed cells after oncogene-directed mutagenesis in vivo.
- SO Eksperimental'naya Onkologiya, (1993) Vol. 15, No. 1, pp. 23-27. ISSN: 0204-3564.
- AU Savtsova, Z. D. (1); Zaritskaya, M. Yu.; Yudina, O. Yu.; Pantin, V. I.; Solov'ev, G. Ya.; Voeikova, I. M.; Grineva, N. I.
- AB Reverted cell line A-5 was created as a result of treatment of the cells transformed by adenovirus oncogene with polyalkylation derivatives of single-stranded polynucleotides complementary to the long SA7 El oncogene sequences (oncogene-directed mutagenesis in vivo). The phenotype of the reverted cells differs from that of the initial transformed clone in the growth properties, resistance to the natural killer cell action, ability to induce cytotoxic T-cells and also in the main in vivo growth parameters.

At the same time reverted cells maintain tumorigenicity and are able to selected, their malignancy being increased when transplanted to adult

L5 ANSWER 10 OF 21 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE

rats.

- ONCOGENE-DIRECTED MUTAGENESIS IN-VIVO POLYALKYLATING DERIVATIVES OF SHORT SINGLE-STANDED POLYNUCLEOTIDES **COMPLEMENTARY** TO THE E1 ADENOONCOGENE IN THE NORMALIZATION OF RODENT CELL LINES TRANSFORMED WITH ADENOVIRUS DNA.
- SO MOL BIOL (MOSC), (1991) 25 (4), 960-973. CODEN: MOBIBO. ISSN: 0026-8984.
- AU PANTIN V I; SOLOV'EV G YA; SATS N V; SURIN V L; BOROVKOVA T V; KRUTOV A A;

ZHUKOVA E L; GRINEVA N I

AB Polyalkylating derivatives of single-stranded polynucleotides (30-200-mers) complementary to the long El oncogene sequences of simian adenovirus SA7 cause inherited normalization of SH2 and Gl1 cells transformed with adenovirus SA7; certain deletions in the integrated proviral ElA oncogene were observed

several cases during this process. The transformed cells are indifferent to reagents noncomplementary to the El region. Thus polyalkylating derivatives of single-stranded 30-200-mers act as addressed mutagenes which react in a specific way with the integrated **complementary** DNA sequences of El oncogene in transformed rodent cells and realize oncogene-directed mutagenesis in vivo. During this treatment temporary normalized cells reverting to the initial transformed phenotype are also produced.

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          4020 L1 AND GENERATING PLUS(W) STRAND OR MINUS(W) STRAND
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          184 L6 AND DIGEST?
L7
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L11 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2002 ACS
AN
     1987:172465 CAPLUS
DN
     106:172465
     Method and kit for performing nucleic acid hybridization assays
TI
     Snitman, David L.; Stroupe, Stephen D.
ΙN
     AMGEN, USA; Abbott Laboratories
PΑ
     PCT Int. Appl., 52 pp.
SO
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN.CNT 1
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                                        APPLICATION NO. DATE
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     US 1993-136446
L11 ANSWER 2 OF 4 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE
1
     1980:173079 BIOSIS
AN
     BA69:48075
DN
     SPLICED ADENOVIRUS ASSOCIATED VIRUS RNA.
TI
     LAUGHLIN C A; WESTPHAL H; CARTER B J
ΑU
     LAB. EXP. PATHOL., NATL. INST. ARTHRITIS METAB. DIG. DIS., BETHESDA, MD.
CS
     20205, USA.
     PROC NATL ACAD SCI U S A, (1979) 76 (11), 5567-5571.
SO
     CODEN: PNASA6. ISSN: 0027-8424.
FS
     BA; OLD
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LA
L11 ANSWER 3 OF 4
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AN
     73082459
                 MEDLINE
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                PubMed ID: 4509654
DN
     Self-complementarity of terminal sequences within plus or minus
TΙ
     strands of adenovirus-associated virus DNA.
ΑU
     Koczot F J; Carter B J; Garon C F; Rose J A
     PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF
SO
     AMERICA, (1973 Jan) 70 (1) 215-9.
     Journal code: 7505876. ISSN: 0027-8424.
CY
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DT
LA
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FS
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L11 ANSWER 4 OF 4 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 2
     74086992 EMBASE
ΑN
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DN
     Poly (A) and poly (U) in poliovirus double stranded RNA.
ΤI
ΑU
     Yogo Y.; Wimmer E.
     Dept. Microbiol., St Louis Univ. Sch. Med., St Louis, Mo. 63104, United
CS
     NATURE NEW BIOL., (1973) 242/119 (171-174).
SO
     CODEN: NNBYA7
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L11 ANSWER 3 OF 4 MEDLINE

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To correct this problem, CAS will remove the POPLINE records from the MEDLINE file and process the SDI run dated October 8, 2002 again.

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L11 ANSWER 3 OF 4 MEDLINE

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